Andover Wood Products, Inc.	**)**	**Departmental**
Oxford County	**)**	**Findings of Fact and Order**
Andover, Maine	**)**	**Air Emission License**
A-317-71-G-A/R	**)**	

After review of the air emission license renewal application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Andover Wood Products, Inc. (Andover Wood) has applied to renew their air emission license. Lumber and furniture panels are manufactured at the facility located in Andover, Maine. This license includes boilers, an emergency generator, dry kilns, and wood processing areas.

Previously, Andover Wood was licensed with all pollutants below the major source threshold, except for CO. CO was limited to 103.49 tons/year, above the 100 tons/yr threshold. Subsequently, Andover Wood amended the license to become a minor source. In this renewal, it is clarified how Andover Wood remains a minor source: the stand-by boiler 1 (wood fired) will be removed from the license and will not be operated. In addition, the fuel oil use for boiler 2 will increase. With these changes, facility wide CO emissions will be limited to 97.18 tons/year.

B. Emission Equipment

This license addresses the following air emission units:

Boilers

Equipment	Maximum Capacity (MMBtu/hr)	Fuel Type, %Sulfur	Max. Firing Rate	Post Combustion Control	Stack #
Boiler 2	14.6	#2 oil, 0.3% S	97 gal/hr	None	2
Boiler 3	12.0	Wood	0.65 tons/hr	Cyclone	1

Diesel Generator

Power Output	Firing Rate	Max. Input Capacity
170 kW	10 gal/hr	1.4 MMBtu/hr

C. Application Classification

The application for Andover Wood does not include the installation of new or modified equipment. The changes made to the license to remove boiler 1 and increase fuel oil use in boiler 2 result in the following:

Pollutant	Current Licensed Allowed (tons/yr)	Future Licensed Allowed (tons/yr)	Net Emissions Increase (tons/yr)	Significant Emissions Level (tons/yr)
PM	19.47	20.27	0.8	100
PM_{10}	19.47	20.27	0.8	100
SO_2	16.0	47.94	31.94	100
NO_X	16.68	23.51	6.83	100
CO	103.49	97.18	-6.31	100
VOC	8.04	12.67	4.63	50

Since the increased emissions are less than significance levels, the application has been processed as a renewal/minor modification.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent best practical treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

Process Description

Andover Wood manufactures lumber and furniture panels. The facility includes the sawmills, dry kilns, process area, fuel storage, and boilers. Bark, grit, and high moisture material from the sawmill operations is sold rather than burned in the boilers. Boiler fuel consists of dried sawdust and shavings from the sawing and planing operations in the dimension and finishing departments. Boiler 2 (oil) and 3 (wood) exhaust through separate stacks.

Pneumatic conveyors transfer sawdust and shavings to the process cyclones (secondary and high efficiency cyclones). Secondary cyclones are used to separate sawdust from conveying air above each of the wood fired boilers and handle the wood feed rate at which the boiler is operating. Two high efficiency cyclones are located on the roof above the storage bin.

B. Boilers

1. *Boiler 1*
   Boiler 1 (wood fired) shall no longer be operated.

2. *Boiler 2*
   Boiler 2 is a Cleaver Brooks fire tube package boiler rated at 14.6 MMBtu/hr. The boiler fires #2 fuel oil and exhausts through it's own stack. Boiler 2 shall be limited to 300,000 gallons/year of fuel oil.

   Andover Wood shall meet the following BPT emission limits for Boiler 2:
   PM/PM_{10} – 0.2 lb/MMBtu
   SO_2 – Use of #2 fuel with 0.3% sulfur
   NO_X – 0.5 lb/MMBtu
   CO - good combustion, 0.49 lb/hr
   VOC - good combustion, 0.13 lb/hr

   The BPT findings were based on previous licensed emission limits, AP-42 factors and Chapter 103 of the Bureau of Air Quality regulations for particulate matter.

3. *Boiler 3*
   Boiler 3 is a 1924 Dillon boiler rated at 125 psig and 12 MMBtu/hr. In 1992 when the boiler was installed at Andover Wood, a new Dutch oven, underfire air, overfire air and fuel feed system were installed on the boiler. The majority of wood burned in the boiler is kiln dried sawdust and shavings with a mixture of green sawdust for a moisture content of approximately 10%.

Boiler 3 shall meet the following BPT emission limits:

PM/PM_{10} – 0.3 lb/MMBtu, cyclone on the stack
SO_2 – use of wood
NO_X – 0.23 lb/MMBtu
CO - good combustion, 22.0 lb/hr
VOC - good combustion, 1.7 lb/hr

The BPT findings were based on previous licensed emission limits. These limits were determined by taking into account boiler's integrated fuel feed and air control system, the burning of low moisture fuel, and the use of a cyclone. Boiler 3 exhausts through the cyclone and out it's own stack. Boiler 3 does have an opacity monitor which is used in the control of overfire air. The opacity monitor is located upstream of the cyclone collector and is a boiler control device rather than a compliance monitor.

C. Emergency Generator

The emergency diesel generator is rated at 170 KW unit (approximately 1.4 MMBtu/hr) that burns diesel fuel and is used for emergency back-up generation. The generator shall fire 0.05% sulfur oil and shall be limited to 100 hours/year based on a 12 month rolling total. Emissions from the diesel total less than one ton of pollutants. Visible emissions from the emergency generator shall not exceed 30% opacity on a 6 minute block average basis, except for no more than 2 six minute block averages in a continuous 3-hour period.

D. Material Handling and Storage

The material transport system for dried sawdust and shavings consists of enclosed conveyors and cyclones. Routine maintenance at the facility includes inspection of pneumatic conveyors so that any leakage is quickly repaired and spilled sawdust is collected to prevent wind entrainment. Under normal operating conditions, visible conditions from any of the process cyclones will be less than 5% opacity.

The facility currently produces more sawdust than it requires for fuel, therefore excess fuel is sold. The fuel is removed from the end of the storage shed into the trucks which has resulted in some spillage and tracking of sawdust into the roadway. A short term housekeeping program will consist of sweeping and shoveling the sawdust back into the storage pile while Andover Wood investigates a satisfactory long term solutions such as extending the existing shed or improved truck loading operations. Visible emissions from material stockpiles and roadways will be no greater than 10% opacity, based on a 3 minute block average.

E. Gluing Operations

The manufacturing of seats and other furniture products requires the gluing of dimension stock. The adhesives used in the furniture industry often contain VOCs and are a regulatory concern for ozone nonattainment and air toxics. The adhesive used by Andover Wood is a water borne product called 'Ply-loc'. The Material Safety Data Sheet (MSDS) shows the VOC content to be less than 5 g/l. The product is considered non-hazardous, has no known chronic effects, and contains no substance at or above the SARA Section 313 reportable thresholds. Use of this water borne adhesive represents BPT for the gluing operations. Andover Wood shall not exceed 5 tons/year VOC from gluing operations and shall keep records documenting compliance with the limit.

F. Facility Emissions and Fuel Caps

The total facility emissions from Andover Wood were calculated based on continuous operation of boiler 3, boiler 2 firing a maximum of 300,000 gallons of #2 fuel at 0.3% sulfur, 500 hours of operation for the emergency generator, and 5 tons/year VOC from gluing operations. Facility emissions shall not exceed the following, based on a 12 month rolling total:

Total Allowable Annual Emissions for the Facility
(used to calculate the annual license fee)

Pollutant	TPY
PM	20.27
PM_{10}	20.27
SO_2	47.94
NO_X	23.51
CO	97.18
VOC	12.67

III. AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by-case basis. The licensed emissions from Andover Wood are below the emissions levels required for modeling.

ORDER

Based on the above Findings and subject to conditions listed below the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants air emission license A-317-71-G-A/R, subject to the following conditions:

(1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions.

(2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.

(3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both.

(4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request.

(5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 MRSA §353.

(6) The license does not convey any property rights of any sort, or any exclusive privilege.

(7) The licensee shall maintain and operate all emission units and air pollution control systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.

(8) The licensee shall maintain sufficient records, to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.

(9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for the renewal of a license or amendment shall not stay any condition of the license.

(10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.

(11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:

(i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:

a. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
b. pursuant to any other requirement of this license to perform stack testing.

(ii) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and

(iii) submit a written report to the Department within thirty (30) days from date of test completion.

(12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:

(i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and

(ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and

(iii) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

(13) Notwithstanding any other provision in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.

(14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.

(15) Upon written request of the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such manner as the Department shall

prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.

SPECIFIC CONDITIONS

(16) **Boiler 1**

Boiler 1 shall no longer be operated.

(17) **Boiler 2**

A. Boiler 2 (rated at 14.6 MMBtu/hr) shall fire #2 fuel oil with a maximum sulfur content of 0.3% by weight.

B. Emissions from Boiler 2 shall not exceed the following:

Boiler 2 Emission Limits

Pollutant	lb/MMBtu	Lb/hr
PM	0.2	2.9
PM_{10}	0.2	2.9
SO_2	--	30.56
NO_X	0.48	7.08
CO	0.34	0.49
VOC	0.009	0.125

C. Boiler 2 shall be limited to 300,000 gallons/year fuel oil based on a 12 month rolling total. A fuel log shall be maintained documenting monthly fuel use, the 12 month rolling total, and fuel sulfur content.

D. Visible emissions from boiler 2 shall not exceed 30% opacity on a 6 minute block average basis, except for no more than 2 six minute block averages in any continuous 3-hour period.

(18) **Boiler 3**

A. Boiler 3 (rated at 12.0 MMBtu/hr) shall fire wood and shall be the primary steam source for the facility. The wood fired in boiler 3 shall consist of a mixture of dried sawdust and shavings, and green sawdust.

B. Emissions from Boiler 3 shall not exceed the following:

Boiler 3 Emission Limits

Pollutant	lb/MMBtu	Lb/hr
PM	0.3	3.6
PM_{10}	0.3	3.6
SO_2	0.013	0.15
NO_X	0.23	2.8
CO	1.83	22.0
VOC	0.14	1.7

C. Visible emissions from boiler 3 shall not exceed 20% opacity on a 6 minute block average basis, except for no more than 2 six minute block averages in any continuous 3-hour period.

(19) **Emergency Diesel Generator**

A. The emergency diesel generator shall be limited to 500 hours per year, based on a 12 month rolling total. An hour meter shall be used to document generator operation.

B. The fuel fired in the diesel generator shall not exceed 0.05% sulfur by weight.

C. Visible emissions from the emergency generator shall not exceed 30% opacity on a 6 minute block average basis, except for no more than 2 six minute block averages in a continuous 3-hour period.

(20) **Material Handling and Storage**

A. Visible emissions from the process cyclones on the material transport system shall be limited to 5% opacity.

B. Visible emissions from materials and stockpiles shall not exceed 10%, on a 3 minute block average.

(21) **Gluing Operations**

Andover Wood shall be limited to 5 tons/year VOC from gluing operations, based on a 12 month rolling total. Records shall be maintained on the amount of adhesive used, VOC content of the adhesive, and the total monthly VOC emissions. A 12 month rolling total of VOC emissions shall also be recorded.

(22) **Facility Emissions**

Facility emissions shall be limited to the following, based on a 12 month rolling total:

Pollutant	TPY
PM	20.27
PM_{10}	20.27
SO_2	47.94
NO_X	23.51
CO	97.18
VOC	12.67

(23) The term of this order shall be for five (5) years from the signature date below.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 1999.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
EDWARD O. SULLIVAN, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: October 29, 1998
Date of application acceptance: October 30, 1998

Date filed with Board of Environmental Protection:_____

This order prepared by Kathleen E. Neil , Bureau of Air Quality.